III. AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original): An apparatus for automatic processing of at least one biological sample accommodated on a carrier member, such as a slide, by applying a predetermined amount of reagents in a predetermined sequence according to a processing protocol, comprising:
a housing frame;
at least one sample processing section for accommodating at least one carrier member for a sample, said at least one sample processing section is provided within said housing;
a cover protecting said at least one sample processing section in said housing, said cover enclosing the sample processing section and defining an interior space between the housing and the cover;
at least one climate control device configured to control the environment within said interior space; and
a sensor device providing feedback signals to the climate control means.

2. (Currently amended): An apparatus according to claim 1, wherein the sensor device is adapted to sense at least one climate parameter from the group ~~comprising~~ consisting of temperature, pressure, humidity, airspeed and the presence of toxic elements in fume.

3. (Currently amended): An apparatus according to claim 1 [[or 2]], wherein the sensor device comprises internal sensors located inside the interior space.

4. (Currently amended): An apparatus according to any of claims 1 [[to 3]], wherein the sensor device comprises external sensors located outside the interior space, such as at

or inside an air inlet/outlet manifold, in a laboratory facility accommodating the apparatus, or outside the building accommodating the laboratory.

5. (Currently amended): An apparatus according to any of the claims 1 [[to 4]], wherein the cover comprises at least one openable hood.

6. (Currently amended): An apparatus according to any of the claims 1 [[to 4]], wherein the cover is an integrated part of the apparatus.

7. (Currently amended): An apparatus according to any of the claims 1 [[to 6]], wherein the cover comprises a plurality of covers arranged to cover a plurality of sections of the apparatus, such as at least one biological sample accommodated on a carrier in the at least one processing section.

8. (Original): An apparatus according to claim 7, wherein a plurality of interior spaces of the apparatus is defined by said plurality of covers, each interior space including at least one section arranged for comprising at least one sample on a carrier and/or at least one section arranged for comprising at least one reagent in a container.

9. (Original): An apparatus according to claim 8, wherein the at least one climate control device is arranged to control the climate in each interior space, comprising at least one sample on a carrier, according to a sample processing protocol defined for that particular sample.

10. (Original): An apparatus according to claim 9, wherein the at least one climate control device receives input signals from internal and/or external sensors, and is arranged to adjust the controlling the climate in each interior space, according to the input signals.

11. (Currently amended): An apparatus according to claim 8 [[to 10]], wherein the at least one climate control device is connected for data communication with a data processing device, such as a computer, wherein the protocol for the processing of the

particular sample is stored, and where from control data are provided to the climate control means.

12. (Currently amended): An apparatus according to any of the claims 1 [[to 11]], wherein the at least one climate control device controls at least the pressure and ensures a slight sub-pressure within the interior space.

13. (Currently amended): An apparatus according to any of the claims 1 [[to 11]], wherein the at least one climate control device controls at least the pressure and ensures a slightly higher pressure within the interior space.

14. (Currently amended): An apparatus according to any of the claims 1 [[to 13]], wherein the at least one climate control device includes humidity control within the interior space.

15. (Currently amended): An apparatus according to any of claims 1 [[to 14]], wherein the at least one climate control device controls the ambient temperature of the air within the interior space.

16. (Currently amended): An apparatus according to any of claims 1 [[to 15]], wherein the climate control device comprises a ventilation system configured to automatically ~~exchanging~~ exchange the air in the interior space.

17. (Original): An apparatus according to claim 16, wherein the ventilation system comprise a fan in an opening through which air may be exchanged.

18. (Original): An apparatus according to claim 17, further comprising at least one air manipulation device wherein said opening being provided with the characteristics of the air flowing into the apparatus, such as the air temperature, pressure, air flow rate and humidity.

19. (Currently amended): An apparatus according to any of claims 1 [[to 18]], wherein the climate control device comprises an exhaustion device capable of removing fumes from the interior space.

20. (Currently amended): An apparatus according to any of claims 1 [[to 19]], wherein the climate control device comprises a device capable of recycling air for humidity, temperature and toxic control, a device capable of removing toxic elements from the air to be recycled, and/or a device capable of supplying humidity to the air to be recycled and/or a heater/cooling device capable of controlling the temperature of the air to be recycled.

21. (Original): An apparatus according to claim 20, wherein the device configured to recycle air comprises a filter capable of cleaning and/or humidifying the air.

22. (Currently amended): An apparatus according to any of claims 19 [[to 21]], wherein said exhaustion device is adapted to draw air from an outlet positioned below the level in which the at least one slide is accommodated.

23. (Currently amended): An apparatus according to any of claims 19 [[to 21]], wherein said exhaustion device is adapted to draw air from an outlet positioned above the level in which the at least one slide is accommodated.

24. (Currently amended): An apparatus according to any of claims 1 [[to 23]], wherein said cover are provided with at least one seal element to provide an air tight seal between the cover means and the housing.

25. (Currently amended): An apparatus according to any of claims 1 [[to 24]], wherein an inlet is provided for supplying air into the interior space comprising at least one air inlet opening in the housing frame, and wherein an air manipulation device are provided in said inlet means for adapting the inflowing air with predetermined characteristics.

26. (Original): An apparatus according to claim 25, wherein said air manipulation device comprises an a humid filter device wherein the inlet air is drawn through said humid filter device to ensure high and uniform humidity in the chamber.

27. (Original): An apparatus according to claim 25, wherein the air manipulation device controls humidity by spraying water droplets or having a water surface.

28. (Original): An apparatus according to claim 25, wherein the air manipulation device comprises an air recycling device where the recycled air is drawn through filters to remove fumes and filters to adjust the humidity.

29. (Original): An apparatus according to claim 25, wherein the air manipulation device controls the humidity to never be below a predetermined level, to prevent drying out of the sample.

30. (Currently amended): An apparatus according to claim 25, wherein the air manipulation device comprises an air additive supply device by which ~~disfectants~~ disinfectants, UV protectants or other compounds may be added to the inlet air to prevent microbial growth or discolouring.

31. (Currently amended): An apparatus according to claim 25, wherein the air manipulation device comprises an air additive supply arranged for addition of fluids from the group ~~comprising~~ consisting of reagents, neutral gas, oxygen, ~~carbondioxide~~ carbon dioxide, nitrogen, water droplets, and formamide.

32. (Currently amended): An apparatus according to any of claims 1 [[to 31]], wherein the apparatus comprises at least one sensor device to register one or more parameters of the air in interior space of the apparatus, said sensors being arranged in the vicinity of the cover means and/or in the vicinity of the sample carriers on a carrier rack assembly.

33. (Original): A method of automatically processing one or more biological samples accommodated on a carrier member, such as a slide, by applying a predetermined amount of reagents in a predetermined sequence according to a processing protocol in an automatic sample processing apparatus, comprising the steps of:
measuring at least one air characteristic inside an interior space in which at least one carrier member is provided inside a cover enclosing the samples accommodated in the apparatus, and
ventilating said interior space and controlling said apparatus according to a predetermined processing environment defined in a processing control procedure, said ventilation including exchanging air through at least one air inlet and air outlet.

34. (Original): A method according to claim 33, wherein the inlet air is drawn through a humid filter device of the air manipulation device to ensure high and uniform humidity in the chamber.

35. (Original): A method according to claim 33, wherein the humidity is controlled by spraying water droplets or having a water surface.

36. (Original): A method according to claim 33, wherein recycled air is drawn through filters to remove fumes and filters to adjust the humidity.

37. (Original): A method according to claim 33, wherein the humidity is controlled to never be below a predetermined level, to prevent drying out of the sample.

38. (Currently amended): A method according to claim 33, wherein ~~disfectants~~ disinfectants, UV protectants or other compounds may be added to the inlet air to prevent microbial growth or discolouring.

39. (Currently amended): ~~An apparatus~~ A method according to claim 33, wherein the air manipulation device comprises air additive supply device arranged for addition of

fluids from the group ~~comprising~~ consisting of reagents, neutral gas, oxygen, ~~carbondioxide~~ carbon dioxide, nitrogen, water droplets, and formamide.

40. (New): An apparatus for automatic staining of at least one biological sample accommodated on a carrier member, such as a slide, by applying a predetermined amount of reagents in a predetermined sequence according to a processing protocol, comprising:
a housing frame;
at least one sample processing section for accommodating at least one carrier member for a sample, said at least one sample processing section being provided within said housing;
a cover protecting said at least one sample processing section in said housing, said cover enclosing the sample processing section and defining an interior space between the housing and the cover;
at least one climate control device configured to control the environment within said interior space; and
a sensor device providing feedback signals to the climate control means.

41. (New): An apparatus according to either one of claim 40, wherein the sensor device is adapted to sense at least one climate parameter from the group consisting of temperature, pressure, humidity, airspeed and the presence of toxic elements in fume.

42. (New): An apparatus according to either one of claim 40, wherein the sensor device comprises internal sensors located inside the interior space.

43. (New): An apparatus according to either one of claim 40, wherein the sensor device comprises external sensors located outside the interior space, such as at or inside an air inlet/outlet manifold, in a laboratory facility accommodating the apparatus, or outside the building accommodating the laboratory.

44. (New): An apparatus according to either one of claim 40, wherein the cover comprises at least one openable hood.

45. (New): An apparatus according to either one of claim 40, wherein the cover is an integrated part of the apparatus.

46. (New): An apparatus according to either one of claim 40, wherein the cover comprises a plurality of covers arranged to cover a plurality of sections of the apparatus, such as at least one biological sample accommodated on a carrier in the at least one processing section.

47. (New): An apparatus according to claim 46, wherein a plurality of interior spaces of the apparatus is defined by said plurality of covers, each interior space including at least one section arranged for comprising at least one sample on a carrier and/or at least one section arranged for comprising at least one reagent in a container.

48. (New): An apparatus according to claim 47, wherein the at least one climate control device is arranged to control the climate in each interior space, comprising at least one sample on a carrier, according to a sample processing protocol defined for that particular sample.

49. (New): An apparatus according to claim 48, wherein the at least one climate control device receives input signals from internal and/or external sensors, and is arranged to control the climate in each interior space, according to the input signals.

50. (New): An apparatus according to claim 47, wherein the at least one climate control device is connected for data communication with a data processing device, such as a computer, wherein the protocol for the processing of the particular sample is stored, and where from control data are provided to the climate control means.

51. (New): An apparatus according to either one of claim 40, wherein the at least one climate control device controls at least the pressure and ensures a slight sub-pressure within the interior space.

52. (New): An apparatus according to either one of claim 40, wherein the at least one climate control device controls at least the pressure and ensures a slightly higher pressure within the interior space.

53. (New): An apparatus according to either one of claim 40, wherein the at least one climate control device includes humidity control within the interior space.

54. (New): An apparatus according to either one of claim 40, wherein the at least one climate control device controls the ambient temperature of the air within the interior space.

55. (New): An apparatus according to either one of claim 40, wherein the climate control device comprises a ventilation system configured to automatically exchange the air in the interior space.

56. (New): An apparatus according to claim 55, wherein the ventilation system comprise a fan in an opening through which air may be exchanged.

57. (New): An apparatus according to claim 56, further comprising at least one air manipulation device wherein said opening being provided with the characteristics of the air flowing into the apparatus, such as the air temperature, pressure, air flow rate and humidity.

58. (New): An apparatus according to either one of claim 40, wherein the climate control device comprises an exhaustion device capable of removing fumes from the interior space.

59. (New): An apparatus according to either one of claim 40, wherein the climate control device comprises a device capable of recycling air for humidity, temperature and toxic control, a device capable of removing toxic elements from the air to be recycled,

and/or a device capable of supplying humidity to the air to be recycled and/or a heater/cooling device capable of controlling the temperature of the air to be recycled.

60. (New): An apparatus according to claim 59, wherein the device configured to recycle air comprises a filter capable of cleaning and/or humidifying the air.

61. (New): An apparatus according to claim 58, wherein said exhaustion device is adapted to draw air from an outlet positioned below the level in which the at least one slide is accommodated.

62. (New): An apparatus according to claim 58, wherein said exhaustion device is adapted to draw air from an outlet positioned above the level in which the at least one slide is accommodated.

63. (New): An apparatus according to either one of claim 40, wherein said cover is provided with at least one seal element to provide an air tight seal between the cover means and the housing.

64. (New): An apparatus according to either one of claim 40, wherein an inlet is provided for supplying air into the interior space comprising at least one air inlet opening in the housing frame, and wherein an air manipulation device is provided in said inlet means for adapting the inflowing air with predetermined characteristics.

65. (New): An apparatus according to claim 64, wherein said air manipulation device comprises a humid filter device wherein the inlet air is drawn through said humid filter device to ensure high and uniform humidity in the chamber.

66. (New): An apparatus according to claim 64, wherein the air manipulation device controls humidity by spraying water droplets or having a water surface.

67. (New): An apparatus according to claim 64, wherein the air manipulation device comprises an air recycling device where the recycled air is drawn through filters to remove fumes and filters to adjust the humidity.

68. (New): An apparatus according to claim 64, wherein the air manipulation device controls the humidity to never be below a predetermined level, to prevent drying out of the sample.

69. (New): An apparatus according to claim 64, wherein the air manipulation device comprises an air additive supply device by which disinfectants, UV protectants or other compounds may be added to the inlet air to prevent microbial growth or discoloring.

70. (New): An apparatus according to claim 64, wherein the air manipulation device comprises an air additive supply arranged for addition of fluids from the group consisting of reagents, neutral gas, oxygen, carbon dioxide, nitrogen, water droplets, and formamide.

71. (New): An apparatus according to either one of claim 40, wherein the apparatus comprises at least one sensor device to register one or more parameters of the air in interior space of the apparatus, said sensors being arranged in the vicinity of the cover means and/or in the vicinity of the sample carriers on a carrier rack assembly.